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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/678,019	10/01/2003	Paul F. Ranken	FR-7276	9076

7982 7590 12/24/2009
ALBEMARLE CORPORATION
PATENT DEPARTMENT
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EXAMINER	
SALVATORE, LYNDA	

ART UNIT	PAPER NUMBER
1794	

MAIL DATE	DELIVERY MODE
12/24/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	**Application No.** 10/678,019	**Applicant(s)** RANKEN ET AL.
	Examiner LYNDA M. SALVATORE	**Art Unit** 1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 December 2009*.
2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3 and 19-31* is/are pending in the application.
  4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-3,19-31* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  a)☐ All b)☐ Some * c)☐ None of:
    1.☐ Certified copies of the priority documents have been received.
    2.☐ Certified copies of the priority documents have been received in Application No. _____.
    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
  * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
  Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
  Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's request for continuing examination (RCE), amendment and accompanying remarks filed 12/07/09 has been fully considered and entered. Claims 1, 20, 29 and 30 have been amended as requested. Applicant's amendments are found sufficient to overcome the rejections of claims 1-3, 19-23,26-27,29-30 rejected under 35 U.S.C. 103(a) as being unpatentable over Cooray et al., US 2003/0211328 in view of Prescher et al., US 6,143,816. Specifically, the combination of prior art does not teach the claimed epoxy resin advanced with phosphorus. As such, these rejections are hereby withdrawn. However, upon further consideration the following new ground of rejection is set forth herein below.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claim1-3, 19-23,26-27,29-30 rejected under 35 U.S.C. 103(a) as being unpatentable over Asano et al., JP 11279258 in view of Prescher et al., US 6,143,816.

The published JP abstract issued to Asano et al., teach a halogen free flame retardant epoxy resin (abstract). Said resin is prepared by reacting epoxy with an organophosphorus having active hydrogen (abstract). Said resin is employed in a laminated board and exhibits excellent thermal resistance (abstract). Asano et al., does not teach adding a flame retardant filler material such as the claimed boehmite, however, the patent issued to Prescher et al., teach flame retardant composition comprising boehmite particles having a diameter ranging from .7 to 1.2 microns (abstract). Prescher et al., teach employing from 55-75 wt % of the boehmite (column 2, 20-30). Prescher et al., specifically teach that boehmite possesses the following characteristics: easy handling, easily dispersed, balanced mechanical properties, adequate chemical resistance, cost effective, desirable processing temperatures and high extrusion speed (column 3, 25-50).

Cooray et al., does not teach the claimed range, however, it is the position of the Examiner that absent unexpected results it would have been obvious to one having ordinary skill in the art to optimize the amount of boehmite particles in the composition provided by the combination of Asano et al., in view of Prescher et al. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233

Therefore, motivated by the desire to provide a flame retardant composition it would have been obvious to one having ordinary skill in the art at the time the invention was made to formulate the halogen free epoxy resin of Asano et al., with the boehmite particles taught by Prescher et al. Specific motivation to employ the boehmite particles of Cooray et al., is found in the desirable characteristics disclosed by Prescher et al. (e.g., easy handling, easily dispersed, balanced mechanical properties, adequate chemical resistance, cost effective, desirable processing temperatures and high extrusion speed).

4. Claims 24-25, 28 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asano et al., JP 11279258 in view of Prescher et al., US 6,143,816 and further in view of Okamoto et al., US 4,224,302.

The combination Asano et al., in view of Prescher et al., does not teach the claimed specific surface and bulk density values, however, the patent issued to Okamoto et al., teach a process form forming boehmite particles having the claimed bulk density and specific surface values. Said particles exhibit high mechanical strength (abstract, column 1, 19-25 and column 7, table 1, 35-55).

Therefore, motivated by the desire to impart high mechanical strength to epoxy formulations, it would have been obvious to one having ordinary skill in the art the time the invention was made to formulate the epoxy resin of Asano et al., in view of Prescher et al., with the boehmite particles of Okamoto et al.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to LYNDA M. SALVATORE whose telephone number is (571)272-1482. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hendricks Keith can be reached on 571-272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

December 18th, 2009
Art Unit 1794

/Lynda Salvatore/
Primary Examiner